

**REMARKS**

Claims 1-9 are all the claims pending in the application.

The drawings are objected to because Figures 1, 6, 7, 9, 10, 14, 16 and 17 have unreadable labels.

The specification is objected to because page 1 has to be updated.

Claims 3, 5 and 7 are objected to because of certain informalities.

Claims 1-9 are rejected under 35 U.S.C. § 102(a) as being anticipated by Lahiri et al. (“fast performance of bus-based system-on-chip communication architectures”, IEEE/ACM International Conference).

The Applicants traverse the rejections and request reconsideration.

**Drawings**

Applicant hereby file Formal Drawings to overcome the Examiner’s objection to the drawings.

**Objections to the Specification**

The Applicants respectfully submit that a preliminary amendment was filed on March 6, 2001 updating the information in page 1. This obviates the grounds for the objections to the Specification.

**Claim Objections**

The Examiner alleges that the reference to “perturbation...by a value” is unclear. It should be clear to a skilled artisan that in the first step of Claim 3 (as amended), the value of an existing delay of the communication instance is changed by a predetermined value.

In the first step of claim 5, the communication analysis graph (CAG) is analyzed to determine the impact on communication events in one partition due to events in another partition. This is explained in greater detail, for example, on page 40 of the present Specification. A skilled artisan would know the metes and bounds of claim 5 at least by reading the example illustrated on page 40.

The Applicants respectfully submit that delay statistics refer to any statistical quantities derived from the delay. Examples of these statistical quantities are average delay, min/max delay, etc. The statistics that are obtained are combined into a mathematical formula to compute optimized values of parameters that define properties of the communication architecture.

Claim 5 recites that the statistics is used to provide an optimum assignment for a parameter that is used in the communication architecture. Claim 7 further specifies that the parameter that is provided an optimum assignment is “priority.” Again, this is further discussed in greater detail on pages 40-41, with reference to the same example noted above in relation to claim 5. In fact, page 41 provides a specific example formula for the computation of priority for a partition. A skilled artisan would know the metes and bounds of claim 7 at least by reading the example illustrated on page 41.

**Rejection of Claims 1-9 based on Lahiri et al.**

Claims 1-9 are rejected under 35 U.S.C. § 102(a) as being anticipated by Lahiri et al. (“Fast performance of bus-based system-on-chip communication architectures”, IEEE/ACM International Conference, Lahiri et al.).

The above-mentioned paper, by Lahiri et al., deals with performance analysis of an SOC Communication Architecture. On the other hand, the present invention (as recited in claim 1) is

a methodology for designing a communication architecture with a communication architecture tuner. Performance analysis, arguably, is required to perform the design according to the present invention. To that extent, the IEEE paper by Lahiri at best suggests a specific way of implementing a single step in the design of the communication architecture.

However, the above paper has no teaching on the design of the architecture itself. Further, the present invention could use performance analysis techniques other than that suggested in the IEEE paper by Lahiri. The Examiner incorrectly refers to the disclosure related to partitioning on page 569 of Lahiri. However, the only reference to partitioning in Lahiri is related to the partitioning of hardware/software system specification. There is absolutely no teaching (or suggestion) related to partitioning communication clusters as required by step c. In this regard, the Examiner incorrectly contends that the BSE graph represents partition clusters. As noted in Lahiri, page 569, BSE graph merely represents communication traces and does not include partitions of communication clusters.

Further, Lahiri does not disclose or suggest a communication architecture tuner (CAT). Specifically, it does not suggest synthesizing CATs to realize optimized protocols as required by the present invention as recited in claim 1.

To anticipate a claim, each limitation in the claim must be disclosed by the cited reference. Lahiri does not disclose (or suggest) the present invention (as recited in claim 1) at least because of the above reasons.

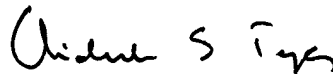
Claims 2-9 are dependant on claim 1 and are allowable at least for the same reasons.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Chid S. Iyer  
Registration No. 43,355

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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